The present invention includes a recognition of the existence and/or nature of certain problems in previous systems, including those discussed herein. The present invention provides a removable optical data recording cartridge which is configured to have relatively high capacity and relatively low weight, size and cost. In one aspect, the system includes writeable media and, preferably, an optical disk cartridge is configured for use in connection with a rotary actuator for data reading and writing. The system can be used in a number of manners including as part of a system for capturing and/or recording data (such as in a digital camera, audio or video recorder, and the like), as part of a system for playing or otherwise outputting data (such as displaying, recorded or "pre-recorded" images, video, audio or other information) or combinations thereof. According to one feature of the invention, the medium is a first-surface medium protected by an enveloping cartridge. Preferably the medium can be configured for recording on both surfaces and the cartridge is configured to permit actuator access through either of two opposed cartridge surfaces. The read/write surfaces of the disk are substantially sealed when the disk is removed from the drive.

B2

The paragraph beginning at page 13, line 26, is rewritten to read as follows:

As shown in Fig. 1, according to one embodiment, a removable, recordable optical storage cartridge 112 includes a rotatable writeable optical storage disk 114 surrounded by a cartridge body having an upper wall 116 and a lower wall 118 joined by a substantially rectangular side wall 122. In one embodiment, the medium is an InSbSn phase change medium, of a type used by Kodak, in connection with 14 inch optical write-once-read-many (WORM) disk products. Examples of suitable media are described in U.S. Patents 4,960,680 and 5,271,978, which describe a recording layer which changes from an amorphous phase to a crystalline phase upon exposure to thermal energy, the reflectivity of the material in the crystalline phase being greater than the reflectivity of the material in the amorphous phase. Such a medium is suitable as a first-surface medium. Such a medium is substantially pan-chromatic or "broadband," such that is can be used with a range of laser light frequencies (e.g., from 400 nm or less to 1100 nm or more wavelength), making it possible to use the invention described herein in connection with short-wavelength lasers (e.g., blue lasers), to achieve a smaller spot size (and thus higher data density) substantially without the need to modify the medium. It is anticipated that a disk 114 formed using such a medium will be substantially rigid. Another example of a medium that can be used in embodiments of the present invention is that described in U.S. Patent 4,816,841 to Kurary Plasmon Data Systems

B3

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Co., Ltd., which is an example of a medium with a plastic substrate. Non-rigid media may, in some embodiments, be adhered to (or otherwise coupled to) one or both surfaces of a rigid substrate to provide a rigid, compound medium, or may be coupled to a semi-rigid (to provide a semi-rigid, compound media) or left uncouple to a substrate to provide a non-rigid medium. As depicted in Fig. 8if the cartridge 112 is used in connection with a non-rigid or semi-rigid film-type disk, 812, the disk 812 is preferably provided with a separate hub 814 to define the center (e.g., for minimizing run-out). The hub 814 can also be useful in providing a seal between the central opening of the cartridge 816a, 816b and the disk 812, e.g., to avoid contact with or contamination of the data-bearing portions of the disk 812.

B3

The paragraph beginning at page 16, line 24, is rewritten to read as follows:

Although many configurations of first-surface media can be used in the context of the present invention, Fig. 7B provides an example of one configuration. In the illustration of Fig. 7B, a (multi-film) recording layer 740 includes a recordable dye or phase change film 742 sandwiched between two dielectric films 744a, b. A reflective film 746, adjacent the sandwich 744a, 742, 744b, is coupled by an adhesion film 748 to a substrate 752. In the illustration of Fig. 7B, the upper surface of the upper dielectric film 744a defines the operational surface of the recording layer 740, i.e., is initially struck by the read/write beam 754. If desired, a thin coating (such as a few molecules thick) of carbon or other wear-resistant material (not shown) can be deposited on the operational surface of the medium.

B4

The paragraph beginning at page 19, line 3, is rewritten to read as follows:

The adhesion film(s) 748 may be provided between films or layers which would have poor adhesion if placed in direct contact. An adhesion film 748 between the recording film and substrate 752 provides for potentially improved adhesion to the substrate, as well as modifying the properties of the recording film when it is deposited, such as its crystallite size in the case of a phase-change medium, which can lead to improved sensitivity and recording readout contrast. In addition, it can be part of the thermal optimization. For example, if the media is erasable phase-change, then it is desirable to control the rate of heat flow to the substrate of other layers. The adhesion film(s) may be as then as 2 -5 angstroms.

B5

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The paragraph beginning at page 29, line 24, is rewritten to read as follows:

During writing (at high power) and reading (when the laser power is reduced so as to ensure that no writing occurs), the beam is reflected back from the disk 1707 with

B6